UNITED STATES PATENT AND TRADEMARK OFFICE

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MICHAEL BEST & FRIEDRICH LLP
Two Prudential Plaza
180 North Stetson Avenue, Suite 2000
CHICAGO, IL 60601

EXAMINER
YUN, EUGENE

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/573,279	KONDO, TAKAYUKI
	Examiner	**Art Unit**
	EUGENE YUN	2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>25 April 2008</u>.
2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-16</u> is/are pending in the application.
     4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) <u>1-16</u> is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on <u>23 March 2006</u> is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
     a) ☒ All   b) ☐ Some * c) ☐ None of:
       1. ☒ Certified copies of the priority documents have been received.
       2. ☐ Certified copies of the priority documents have been received in Application No. _____.
       3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
     Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2.   Claims 1, 3-6, 8, 9, 10, 13-16 are rejected under 35 U.S.C. 102(e) as being

anticipated by Rudrapatna (U.S. Pub. No. 2004/0092233 A1).

Referring to claim 1, Rudrapatna discloses a mobile communication system in

which variable rate transmission is performed over a downlink radio channel (see title,

abstract, para[009], [0015]) among a base station control apparatus (20 of fig.1), a radio

base station (14 of fig.1), and a mobile station (16 of fig.1), the radio base station (14 of

fig.1) comprising:

a transmission rate determining part (demultiplexer 44 of fig.2) for determining a

transmission rate in accordance with a size of transmission data to the mobile station

(16 of fig.1) (see fig.1,2 and para[0022],[0023]);

(i.e. demultiplexer 44, determine and provide transmission information rate

according to received power control rate command from the wireless terminal unit

(WTU) i.e. mobile unit)

and a transmission power control (i.e. changing) part (58 of fig. 1) for controlling,

changing and adjusting a transmission power of the transmission data in accordance

with a forward error correction associated with gain difference (determine by the

automatic gain controller 48 and power controller 58) and depending on the determined

transmission rate (see figs 1 and 2 and para[0020], [0022], [0023], [0025])

(i.e. transmission power controller 58 command extracting, changing

transmission power of a transmission data in accordance with determining the gain

(algorithm is used for determining the gain by the automatic gain controller 48 and

power controller 58) and quality measurer 54 determine bit error rate based on forward

error rate which is associated with gain based on the determining transmission rate)

Referring to Claim 3, Rudrapatna further discloses variable rate (rate increment /

decrement) control is performed by setting (i.e. incrementing) and setting (i.e. attaching)

rate information by the demultiplexer specifying a transmission rate by each

transmission frame in accordance with the transmission data size which is obtained

from the mobile station among the base station control apparatus (20), the radio base

station (14) and the mobile station(16) (see figs. 1,2,3 and para[0021],[022],[0023]).

Referring to Claim 4, Rudrapatna further discloses the mobile station (16 of

fig.3,VVTU) includes a transmission rate determining part (controller 70, associated

with transmitter and receiver includes circuitry demultiplexer for extracting power control

command and adjust transmission power and rate) for estimating a transmission rate

from a power distribution of a received signal from base station(see fig. 1,3 and para[

029],[0032]).

Referring to Claim 5, Rudrapatna further discloses the communication system is a CDMA (Code Division Multiple Access) radio network in which variable rate transmission is performed over a downlink channel (see fig. 1,2,3 and para [0014],[0015]).

Referring to Claim 6, Rudrapatna discloses a radio base station (14 of fig.I,2) that is allocated between base station controller (20 of fig.1) and a mobile station (16 of fig.1) wherein variable rate transmission is performed over a downlink radio channel (see title, abstract, para [009],[0015]) among a base station control apparatus (20 of fig.1), a radio base station (14 of fig.1), and a mobile station (16 of fig.1), the radio base station (14 of fig.1) comprising:

a transmission rate determining part (demupltiplexer 44 of fig.2) for determining a transmission rate in accordance with a size of transmission data to the mobile station (16 of fig.1) (see fig.1,2 and para[022],[0023]);

(i.e. demultiplexer 44, determine and provide transmission information rate according to received power control rate command from the wireless terminal unit (WTU) i.e. mobile unit)

and a transmission power control (i.e. changing) part (58 of fig. 1) for controlling, changing and adjusting a transmission power of the transmission data in accordance with a forward error correction associated with gain difference (determine by the automatic gain controller 48 and power controller 58) and depending on the determined transmission rate (see fig. 1,2 and para[0020],[0022],[0023],[0025])

(i.e. transmission power controller 58 command extracting, changing

transmission power of a transmission data in accordance with determining the gain

(algorithm is used for determining the gain by the automatic gain controller 48 and

power controller 58) and quality measurer 54 determine bit error rate based on forward

error rate which is associated with gain based on the determining transmission rate)

Referring to Claim 8, Rudrapatna further discloses the radio base station (14 of

fig. 2) further comprising:

a transmission frame producing part (44 of fig.2) for encoding by the encoder (32

of fig.2) the transmission data into a transmission frame and a transmitting part (38 of

fig. 2) for transmitting the determined transmission rate and the encoded transmission

frame in accordance with the determined transmission power (see fig. 1,2 and para

[0019],[0022],[0023],[0025]).

Referring to Claim 9, Rudrapatna further discloses the communication system is

a CDMA (Code Division Multiple Access) radio network in which variable rate

transmission is performed over a downlink channel (see fig. 1,2,3 and

para[0014],[0015]).

Referring to Claim 10, Rudrapatna discloses a transmission power control

method for a mobile communication system in which variable rate transmission is

performed over a downlink radio channel a radio base station (14 of fig.I,2) that is

allocated between base station controller (20 of fig. 1) and a mobile station (16 of fig. 1)

wherein variable rate transmission is performed over a downlink radio channel (see title,

abstract, para [009],[0015]) among a base station control apparatus (20 of fig. 1), a

radio base station (14 of fig.1), and a mobile station (16 of fig.1), the radio base station

(14 of fig.1) comprising:

a transmission rate determining part (demultiplexer 44 of fig.2) for determining a

transmission rate in accordance with a size of transmission data to the mobile station

(16 of fig.1) (see fig.1,2 and para[022],[0023]);

(i.e. demultiplexer 44, determine and provide transmission information rate

according to received power control rate command from the wireless terminal unit

(VVTU) i.e. mobile unit)

and a transmission power control (i.e. changing) part (58 of fig.l) for controlling,

changing and adjusting a transmission power of the transmission data in accordance

with a forward error correction associated with gain difference (determine by the

automatic gain controller 48 and power controller 58) and depending on the determined

transmission rate (see fig.1,2 and para[0020],[0022],[0023],[0025])

(i.e. transmission power controller 58 command extracting, changing

transmission power of a transmission data in accordance with determining the gain

(algorithm is used for determining the gain by the automatic gain controller 48 and

power controller 58) and quality measurer 54 determine bit error rate based on forward

error rate which is associated with gain based on the determining transmission rate).

Referring to Claim 13, Rudrapatna further discloses variable rate (rate increment

/ decrement) control is performed by setting (i.e. incrementing) and setting (i.e.

attaching) rate information by the demultiplexer specifying a transmission rate by each

transmission frame in accordance with the transmission data size which is obtained

from the mobile station among the base station control apparatus (20), the radio base

station (14) and the mobile station(16) (see fig. 1,2,3 and para[0021],[022],[0023]).

Referring to Claim 14, Rudrapatna further discloses the mobile station (16 of

fig.3,WTU) includes a transmission rate determining part (controller 70, associated with

transmitter and receiver includes circuitry demultiplexer for extracting power control

command and adjust transmission power and rate) for estimating a transmission rate

from a power distribution of a received signal from base station(see fig. 1,3 and

para[0029],[0032]).

Referring to Claim 15, Rudrapatna further discloses the communication system is

a CDMA (Code Division Multiple Access) radio network in which variable rate

transmission is performed over a downlink channel (see fig. 1,2,3 and

para[0014],[0015]).

Referring to Claim 16, Rudrapatna discloses a program for a transmission power

control method for a mobile communication system in which variable rate transmission

is performed over a downlink radio channel (see para[0029]), a radio base station (14 of

fig.I,2) that is allocated between base station controller (20 of fig.1) and a mobile station

(16 of fig. 1) wherein variable rate transmission is performed over a downlink radio

channel (see title, abstract, para [0009],[0015]) among a base station control apparatus

(20 of fig. 1), a radio base station (14 of fig. 1), and a mobile station (16 of fig. 1), the

radio base station (14 of fig.1), the program can be stored and executed in a computer

at the base station (14) and the program perform processing to determine:

a transmission rate determining part (demupltiplexer 44 of fig.2) for determining a

transmission rate in accordance with a size of transmission data to the mobile station

(16 of fig. 1) (see fig. 1,2 and para[022],[0023]);

(i.e. demultiplexer 44, determine and provide transmission information rate

according to received power control rate command from the wireless terminal unit

(WTU) i.e. mobile unit)

and a transmission power control (i.e. changing) part (58 of fig.1)for controlling,

changing and adjusting a transmission power of the transmission data in accordance

with a forward error correction associated with gain difference (determine by the

automatic gain controller 48 and power controller 58) and depending on the determined

transmission rate (see fig. 1,2 and para[0020],[0022],[0023],[0025])

(i.e. transmission power controller 58 command extracting, changing

transmission power of a transmission data in accordance with determining the gain

(algorithm is used for determining the gain by the automatic gain controller 48 and

power controller 58) and quality measurer 54 determine bit error rate based on forward

error rate which is associated with gain based on the determining transmission rate).

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 2, 7, 11, and 12 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Rudrapatna (U.S. Pub. No. 2004/0092233 A1) and in view of Guo

(U.S. Pub. No. 2006/0002338 A1).

        Referring to Claims 2, 7, 11, and 12, Rudrapatna further discloses a transmission

power control (i.e. changing) part (58 of fig. 1) for controlling, changing and adjusting a

transmission power of the transmission data in accordance with a forward error

correction associated with gain difference (determine by the automatic gain controller 48

and power controller 58) and depending on the determined transmission rate (see

fig.l,2 and para[0020],[0022],[0023],[0025]).

But Rudrapatna silent about reducing the transmission power when the

transmission rate is large, and increases the transmission power when the transmission

rate is small; transmission power is carried out with reference to tables prepared in

advance that show the relations among the transmission data size.

However, Guo teaches a transmission rate change in communication network (see title

and abstract) wherein base station, base station controller and mobile station have been

used for transmitting data associated with power control level (see fig. 1,3,14,15(A) and

para[0018], [0056], [0057]);

        transmission power is reducing when the transmission rate is increasing, and

transmission power is increasing when the transmission rate is small (see fig.4 and

para[0056],[0057],[0092]); and

        a look-up table can be used for controlling transmission power associated with

transmission rate (see fig. 10,11 and para[0076],[0077],[0078],[0079]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify the transmission power controller for changing

transmission power (as taught by Rudrapatna) by incorporating the look-up table with

data comprising transmission power associated transmission rate (as taught by Guo) to

reduce the level of instability in the network as well as improve transmission power

changes as required smoothly.

Response to Arguments

5.   Applicant's arguments filed 4/25/2008 have been fully considered but they are

not persuasive.

The applicant argues that the Rudrapatna reference does not teach "a

transmission rate determining part for determining a transmission rate in accordance

with a size of transmission data to the mobile station". First of all, not much detail is

given as to why the Rudrapatna reference does not teach the above limitation, nor is

there much explanation as to what differentiates the Rudrapatna reference from the

independent claims. The arguments only seem to conclude that the Rudrapatna

reference does not teach "a transmission rate determining part for determining a

transmission rate in accordance with a size of transmission data to the mobile station"

with little to no further explanation. For the lack of explanation or detail alone, the

examiner does not find the arguments persuasive as the examiner would not have cited

the Rudrapatna reference in the previous action if the examiner did not believe the

reference taught the limitations in the independent claims.

Furthermore, there is no further detail in the claims regarding the size of the

transmission data. Therefore, the examiner can assume the size of many elements of

the transmission data, including the number of frames, which is shown in paragraph

[0023]. In this paragraph, the transmission rate is adjusted according to the number of

frames in the transmission data, which is the same as the size of the transmission data.

Therefore, the examiner concludes that the Rudrapatna reference teaches "a

transmission rate determining part for determining a transmission rate in accordance

with a size of transmission data to the mobile station".

Conclusion

6.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to EUGENE YUN whose telephone number is (571)272-

7860. The examiner can normally be reached on 9:00am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Matthew D. Anderson can be reached on (571)272-4177. The fax phone

number for the organization where this application or proceeding is assigned is 571-

273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Eugene Yun/
Primary Examiner, Art Unit 2618

/Matthew D. Anderson/
Supervisory Patent Examiner, Art Unit 2618